

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-16. (Canceled)

17. (New) A communication method that gives permission of participation to a receiving apparatus intending to participate in a group by performing follow-up participation in a group call communication being performed among a plurality of numbers belonging to a predetermined group, wherein

at a transmission end, the method comprising:

a step of encoding and framing an inputted voice signal to generate voice frames of voice data;

a step of discriminating which of sonant audio or silent audio the inputted voice signal is when starting a group call and of incorporating a group number needed for the group call communication into a voice frame which is discriminated to be silent audio;

a step of composing at least a predetermined number N of continuous voice frames and a flag of identifying whether all the N continuous voice frames are sonant audio or at least any one of the N continuous voice frames is not sonant audio, to form a transmission frame;

a step of wirelessly transmitting the transmission frame,

at a reception step performing the follow-up participation to a group, the method comprising:

a step of receiving the wirelessly transmitted signal to decode it to a transmission frame;

a step of decoding a voice frame in the decoded transmission frame;

a first judgment step of judging from the flag in the decoded transmission frame whether all the N voice frames are sonant audio or at least any one of the N voice frames is not sonant audio;

a step of outputting voice data in the decoded voice frame if all the N voice frames are judged to be sonant audio in the first judgment step;

a second judgment step of judging whether data in the decoded voice frame is valid or invalid as voice data if at least any one of the N voice frames is judged to be sonant audio in the first judgment step;

a third step of outputting the data in the decoded voice frame as voice data if it is judged to be valid as voice data in the second judgment step and of judging whether the data in the decoded voice frame is valid or invalid as a group number if it is judged to be invalid as voice data in the second judgment step;

a step of performing error handling if it is judged to be invalid as a group number in the third step;

a step of performing a protocol process based on the group number if it is judged to be valid as a group number;

a step of allowing a group call to be received, converting the voice data to a voice signal and canceling a mute to emit sound if the group number is judged to coincide with a group number of a group to which itself belongs, in the protocol process; and

a step of not canceling the mute if the group number is judged not to coincide with a group of a group to which itself belongs, in the protocol process.

18. (New) A transmitting apparatus that gives permission of participation to a receiving apparatus intending to participate in a group by performing follow-up participation in a group call communication being performed among a plurality of numbers belonging to a predetermined group, the transmitting apparatus comprising:

an encode unit for encoding and framing an inputted voice signal to generate voice frames of voice data;

a frame composition unit configured to discriminate which of sonant audio or silent audio the voice data inputted in the encode unit is when starting a group call, to incorporate a group number needed for the group call communication into a voice frame which is discriminated to be silent audio, and to compose at least a predetermined number N of continuous voice frames and a flag of identifying whether all the N continuous voice frames are sonant audio or at least any one of the N continuous voice frames is not sonant audio, to form transmission frames; and

a transmission unit for transmitting the transmission frames.

19. (New) A receiving apparatus that participates in a group by performing follow-up participation in a group call communication being performed among a plurality of members belonging to a predetermined group, the receiving apparatus comprising:

a reception unit configured to receive a transmission signal and decode a transmission frame from the received transmission signal, wherein the transmission signal is created by encoding and framing an inputted voice signal to generate voice frames of voice data, discriminating which of sonant audio or silent audio the voice data inputted in the encode unit is when starting a group call, to incorporate a group number needed for the group call communication into a voice frame which is discriminated to be silent audio, and composing at least a predetermined number N of continuous voice frames and a flag of identifying whether all the N continuous voice frames are sonant audio or at least any one of the N continuous voice frames is not sonant audio, to form transmission frames;

a frame decomposition unit for decomposing the transmission frame into flag and voice frames;

a steal flag judgment unit for judging whether the flag is true or false;

a voice decoder for reproducing voice data in the voice frames;

a mute processing unit for muting the voice data;

a group number validity judgment unit for judging whether the data in the voice frame is valid or invalid as a group number;

a protocol processing unit for causing voice data to be reproduced if the flag is true and for performing processes, if the flag is false, in such a way that an instruction of entering to a group call reception mode is outputted if the group number judged by the group number validity judgment unit coincides with any of group numbers assigned to itself and that error handling is performed if there is no coincidence in the group number; and

an amplifier for canceling the mute and converting the voice data to a voice signal to emit sound if the group number judged by the group number validity judgment unit coincides with any of group numbers assigned to itself.